LWG
LOWER WILLAMETTE GROUP

Portland Harbor Superfund Site Draft Feasibility Study – Sediment Management Area Development

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Cleanup Trigger Levels - RALs

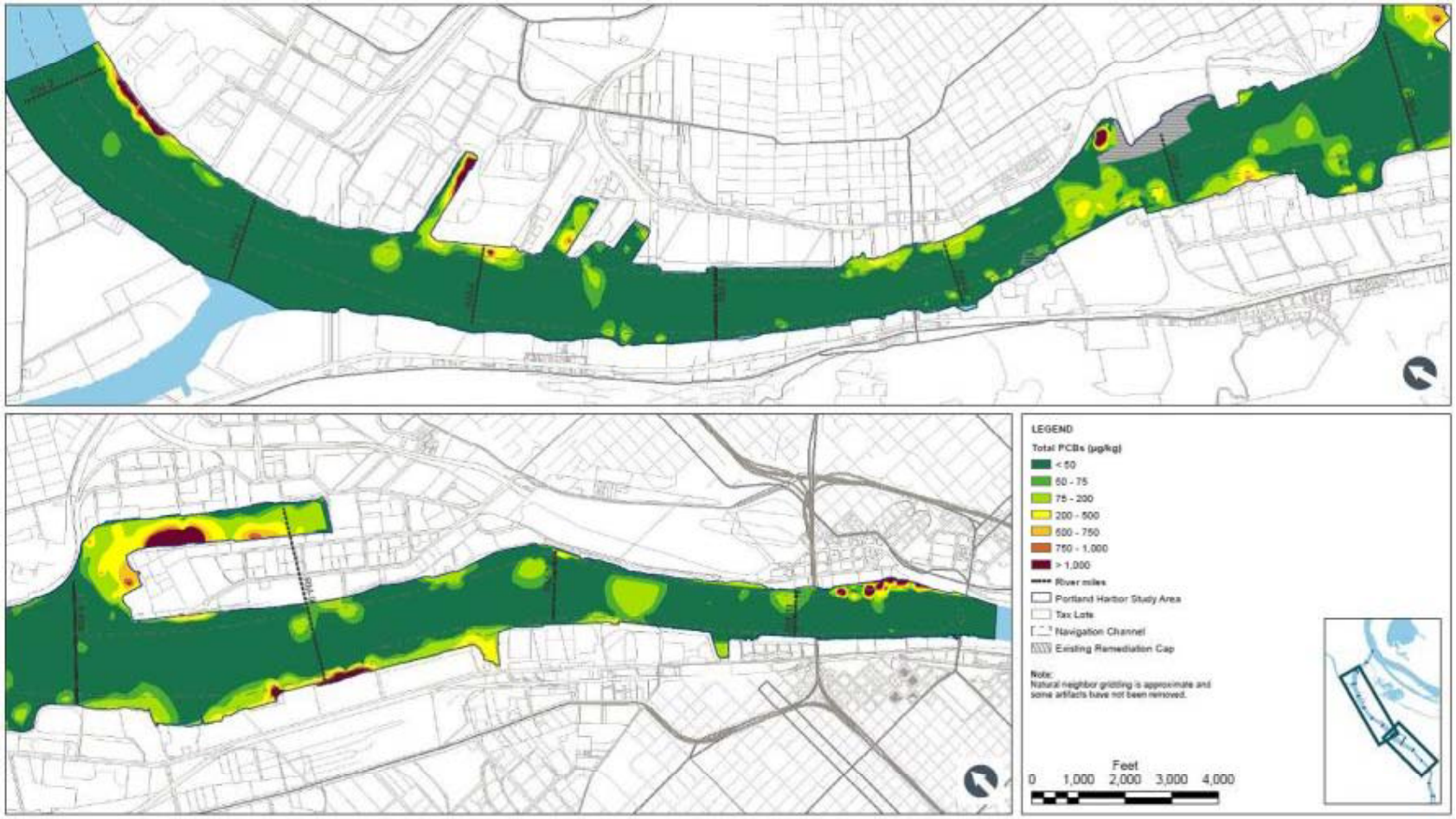
- Triggers are established to determine how much area needs active cleanup
- Example:
  - 1000 parts per billion = smaller footprint for active cleanup
  - 75 parts per billion = large footprint of active cleanup
- Can’t clean up beyond natural background

Remedial Action Levels

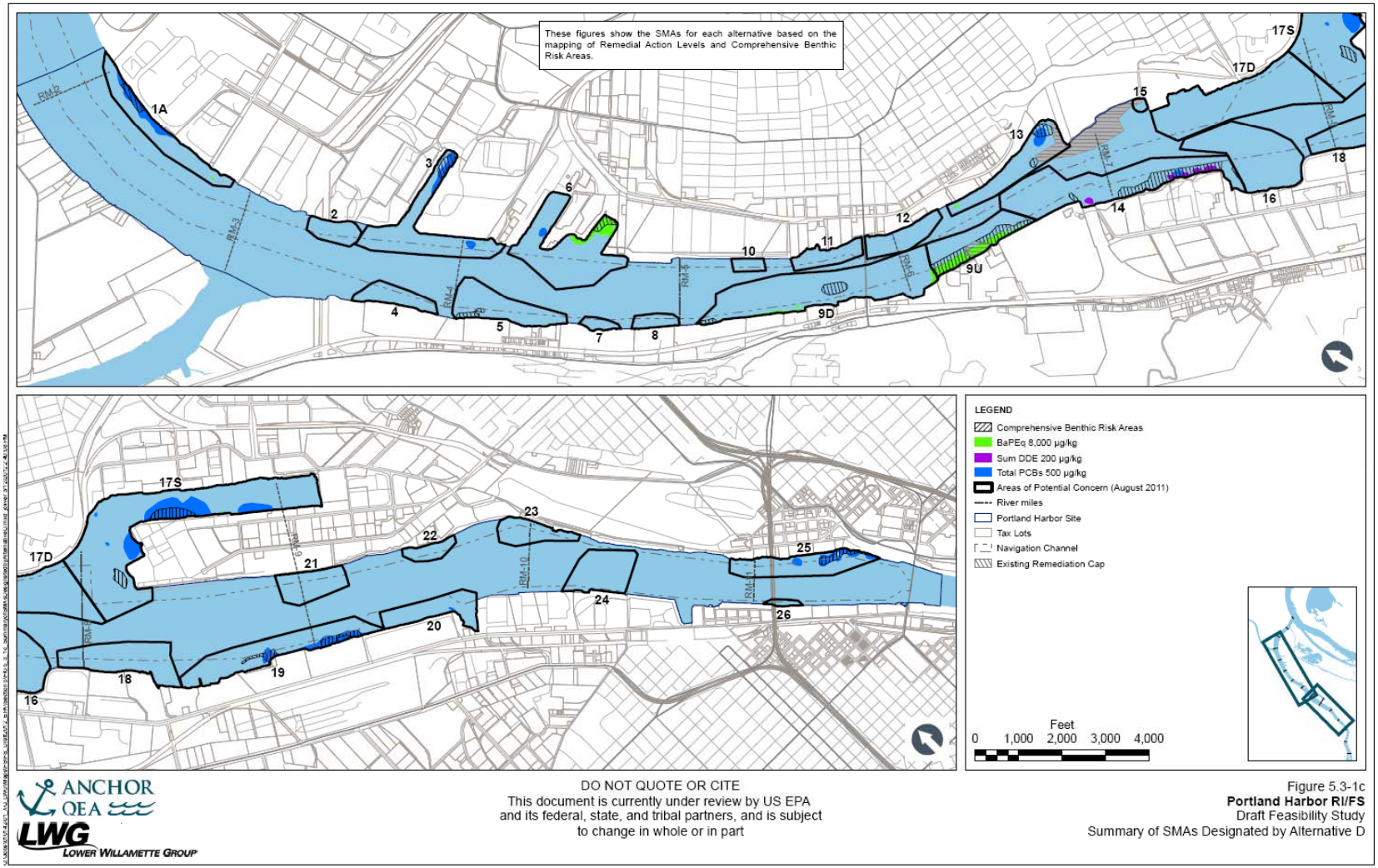
Alternative	Portland Harbor RALs (parts per billion)						
	PCB	PAH	DDD	DDE	DDT	Dioxin/ Furans	Benthic Toxicity
A	None	None	None	None	None	None	None
B	1,000	20,000	NA	1,000	NA	NA	No Toxicity in 10 Years
C	750	15,000	NA	1,000	NA	NA	No Toxicity at Year Zero*
D	500	8,000	NA	200	NA	NA	No Toxicity at Year Zero*
E	200	4,000	100	50	150	0.02	No Toxicity at Year Zero*
F	75	1,500	50	20	60	0.01	No Toxicity at Year Zero*
G	50	600	15	10	20	0.005	No Toxicity at Year Zero*

* No toxicity immediately after active remedy completion.

Surface Sediment PCBs

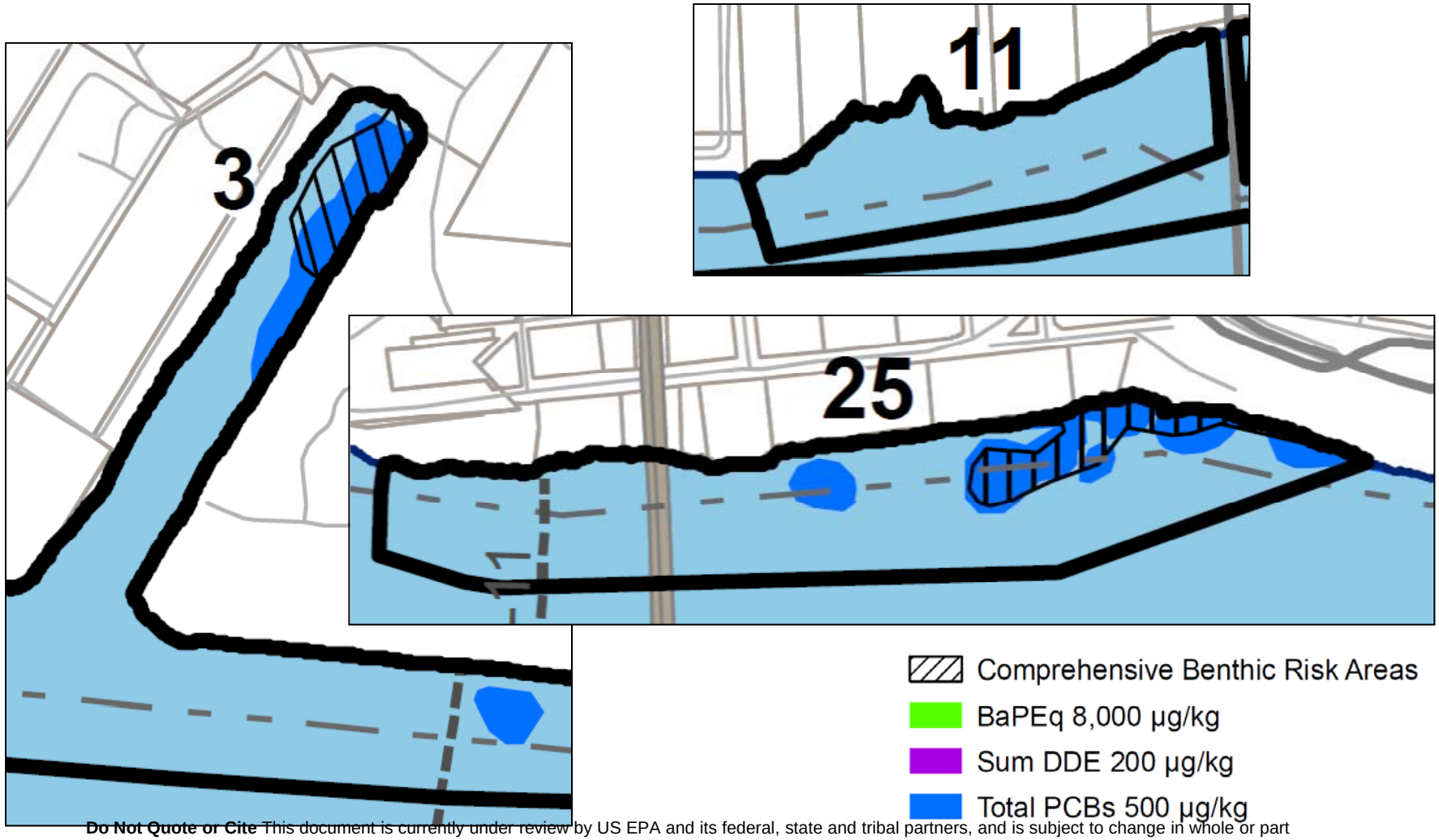


SMA Mapping- Alt D. Example

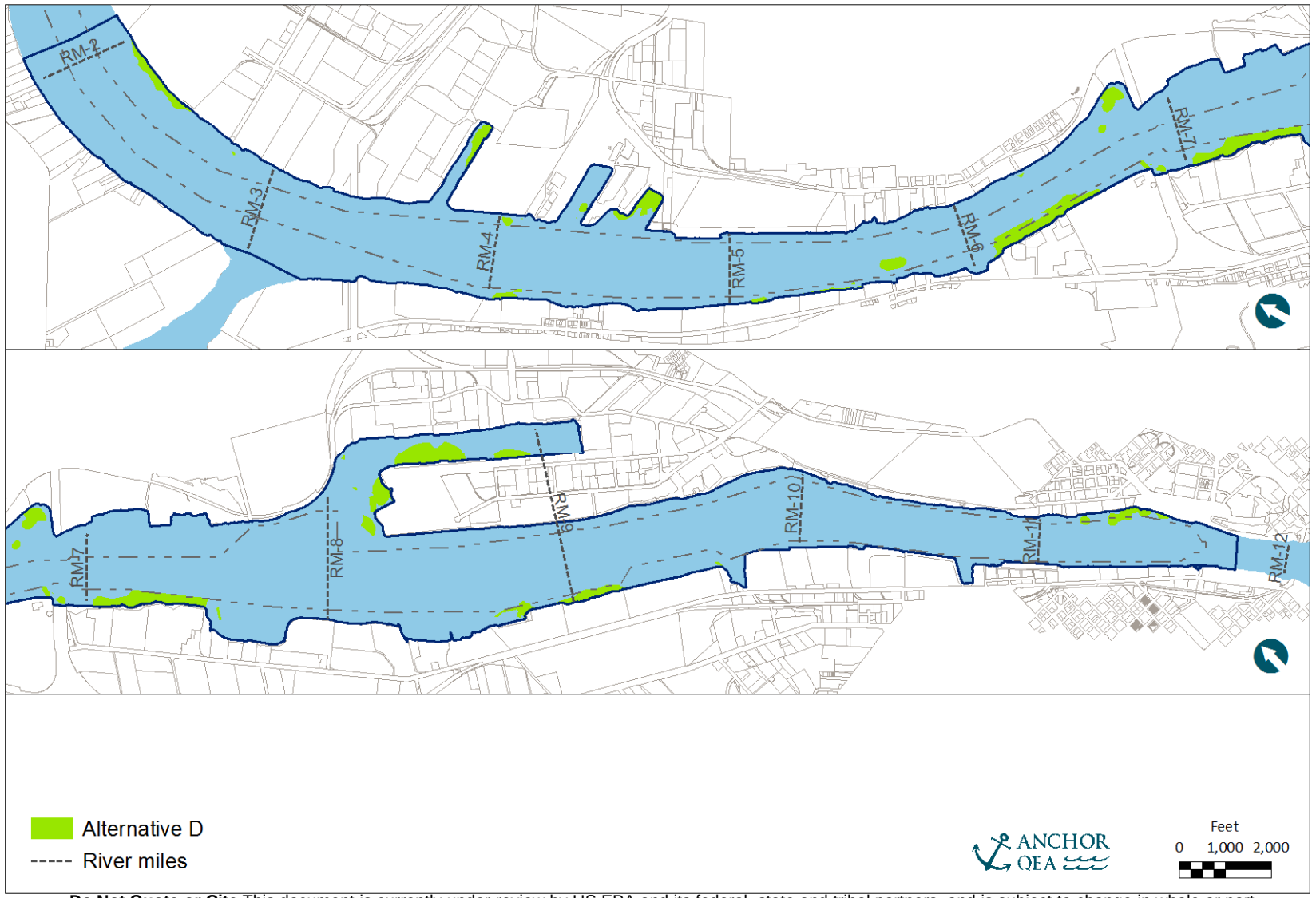


SMA Mapping – Alt D. Example

Figure 5.3-1c

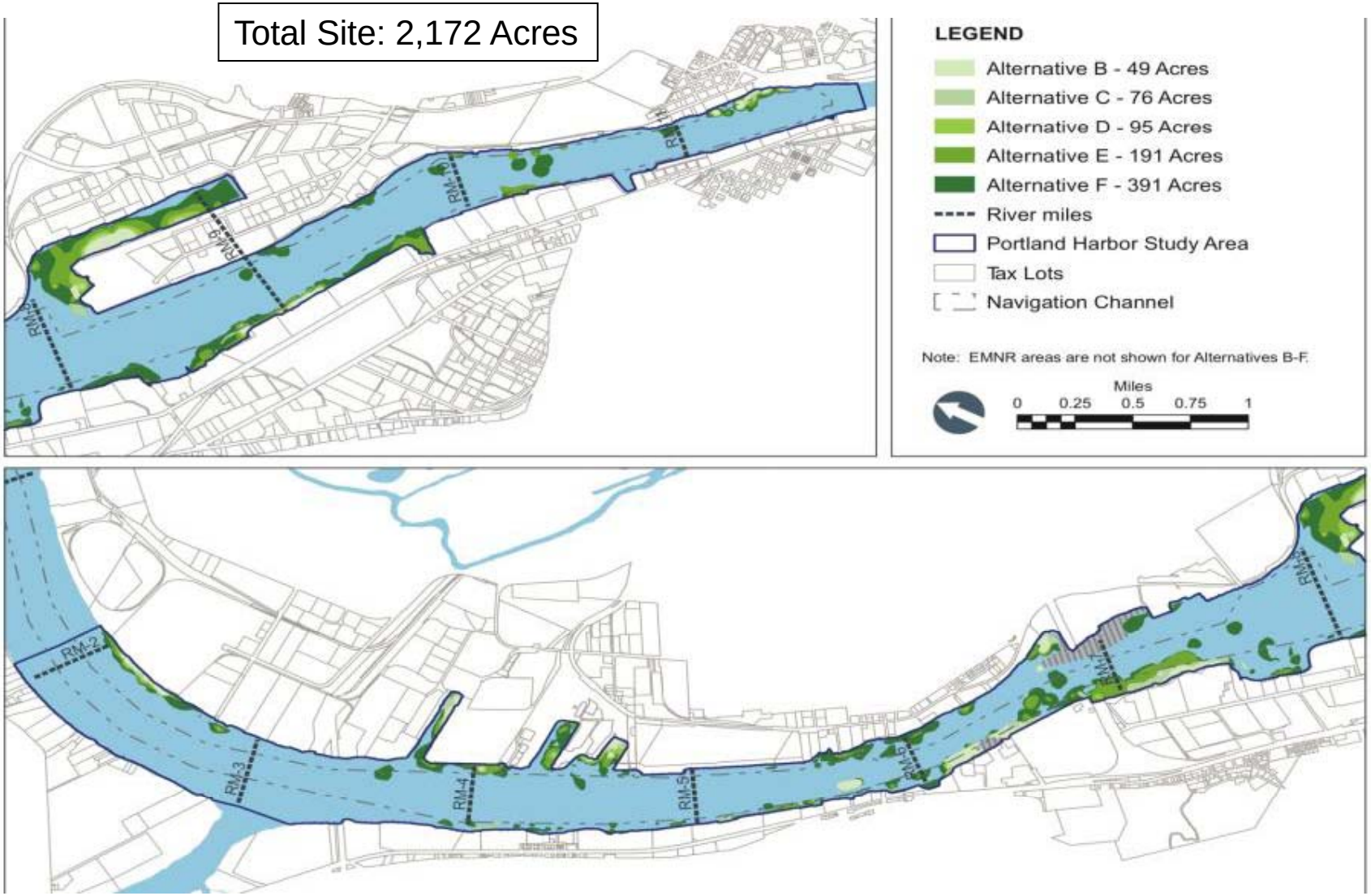


Alternative D



Sediment Management Areas

Total Site: 2,172 Acres



SMA Mapping

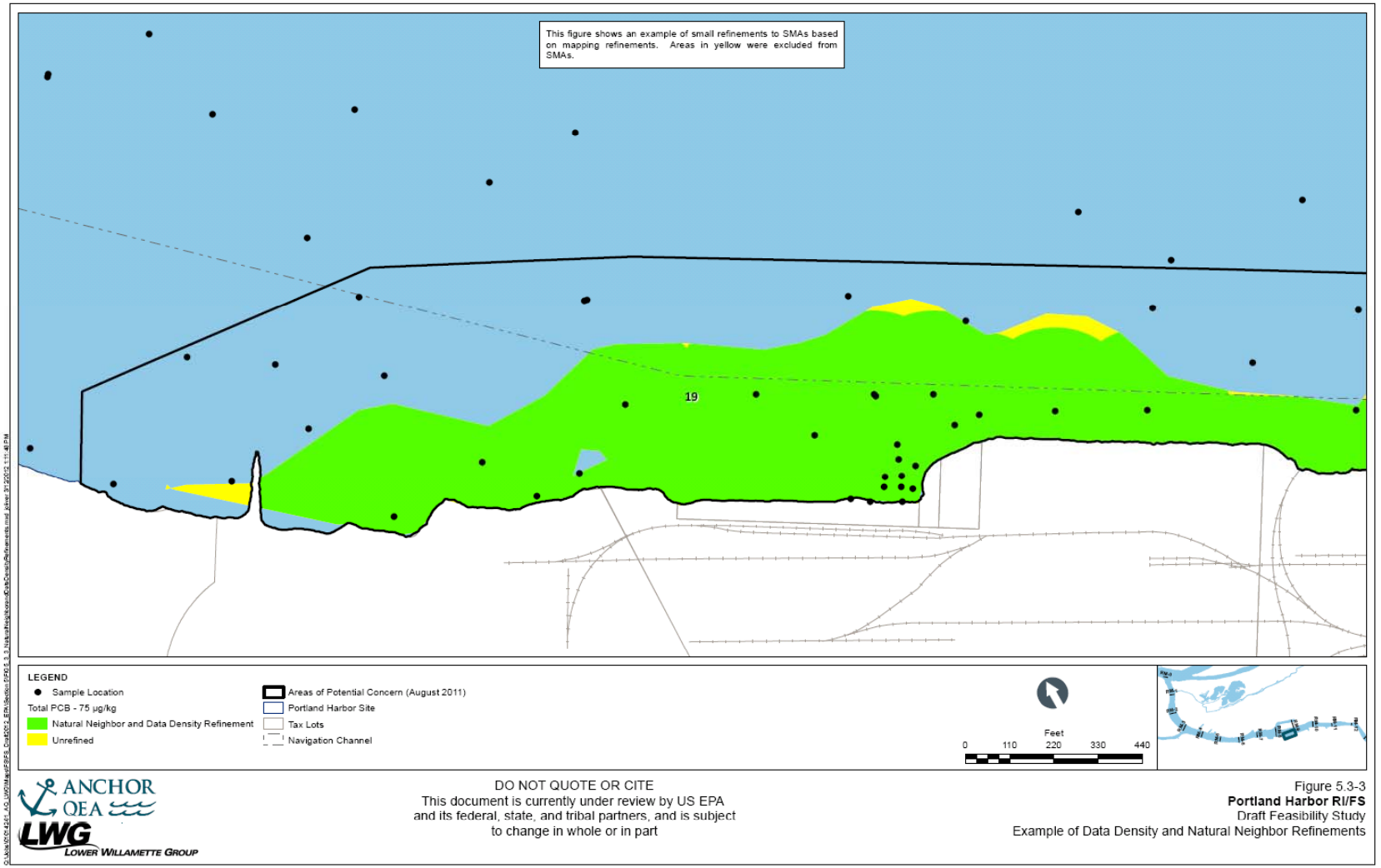


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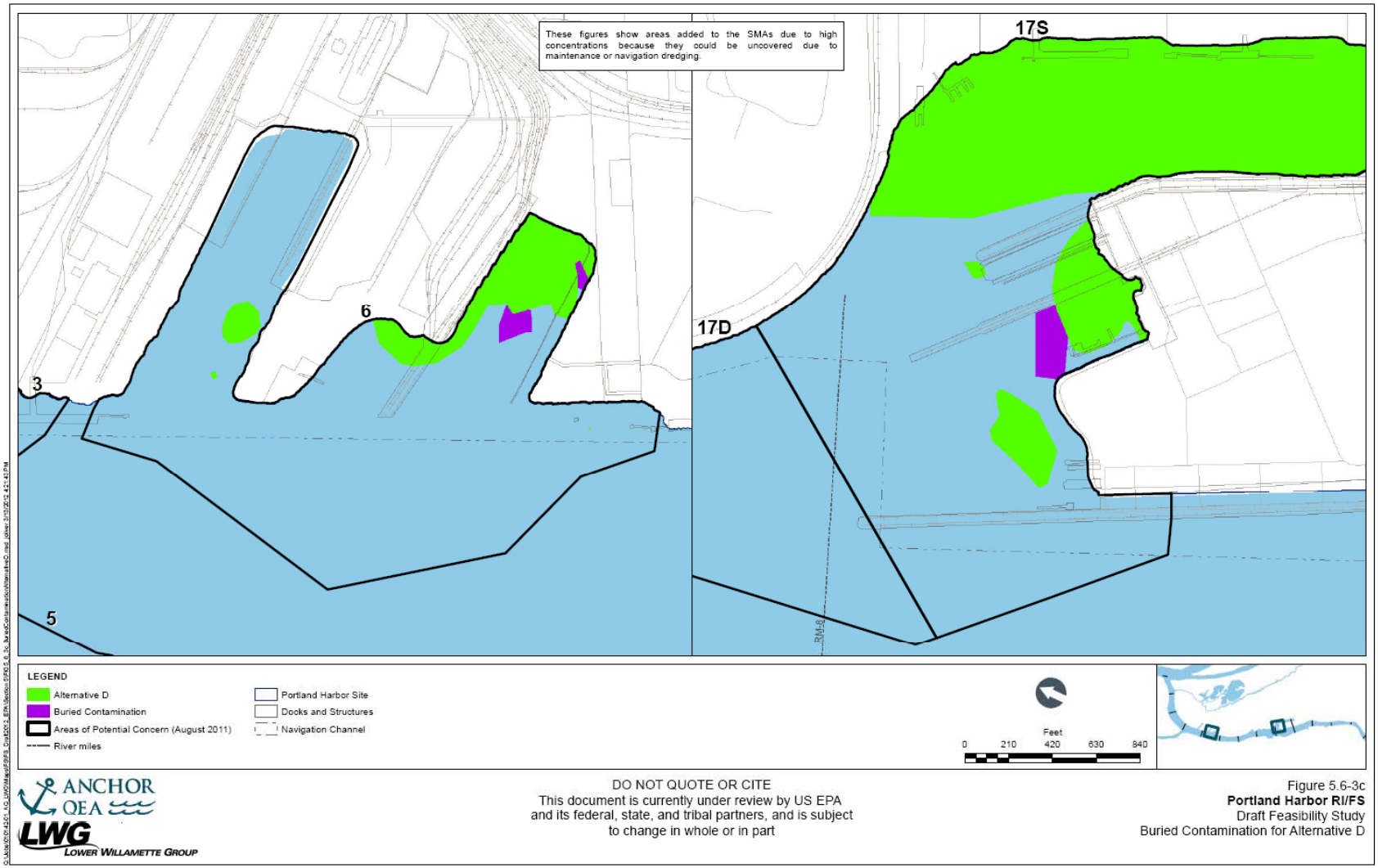
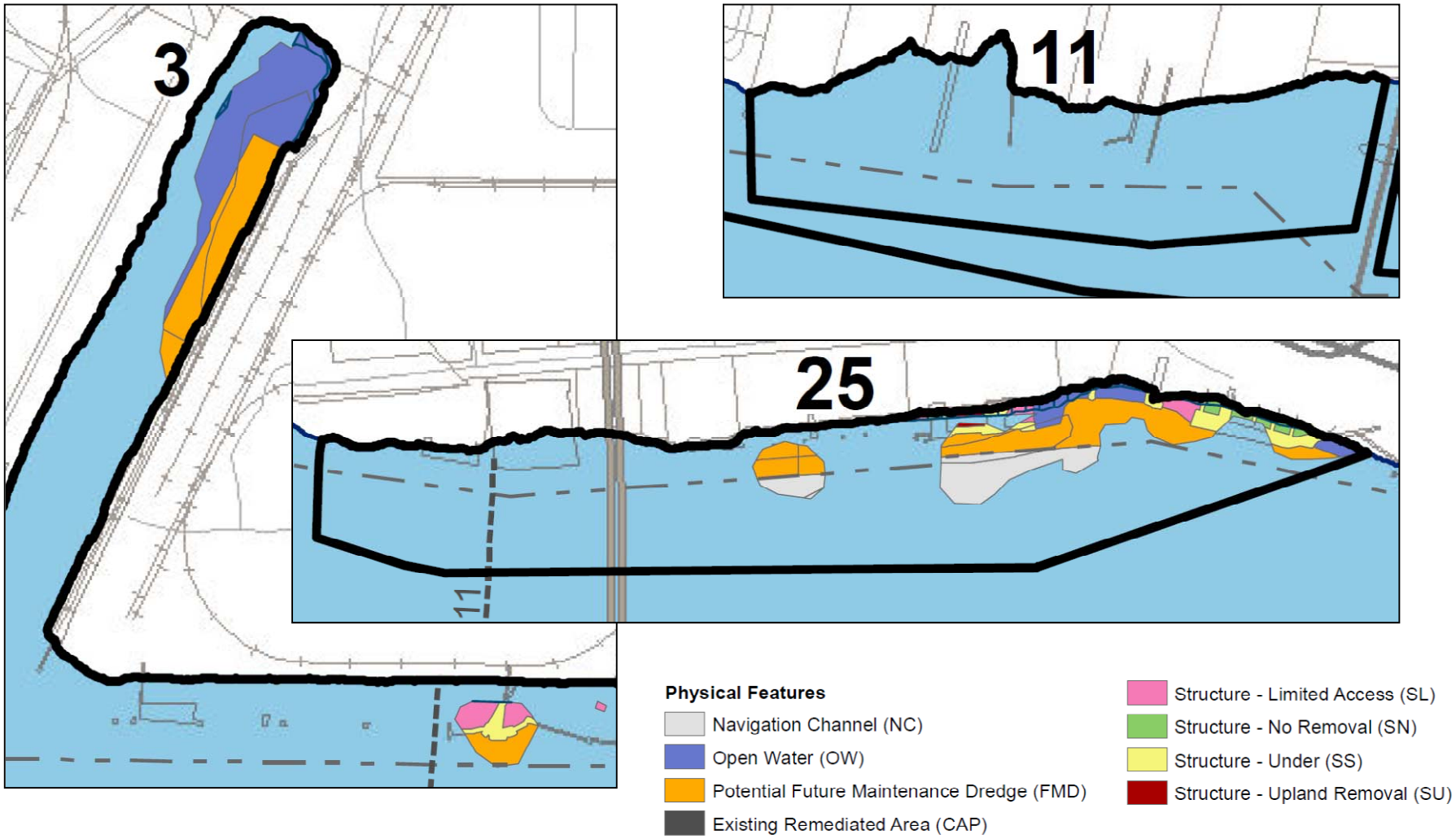
Figure 5.3-3
Portland Harbor RI/FS
Draft Feasibility Study
Example of Data Density and Natural Neighbor Refinements

Buried Contamination Analysis



SMA Physical Features – Alt D. Example

Figure 5.8-1c



Volume Development

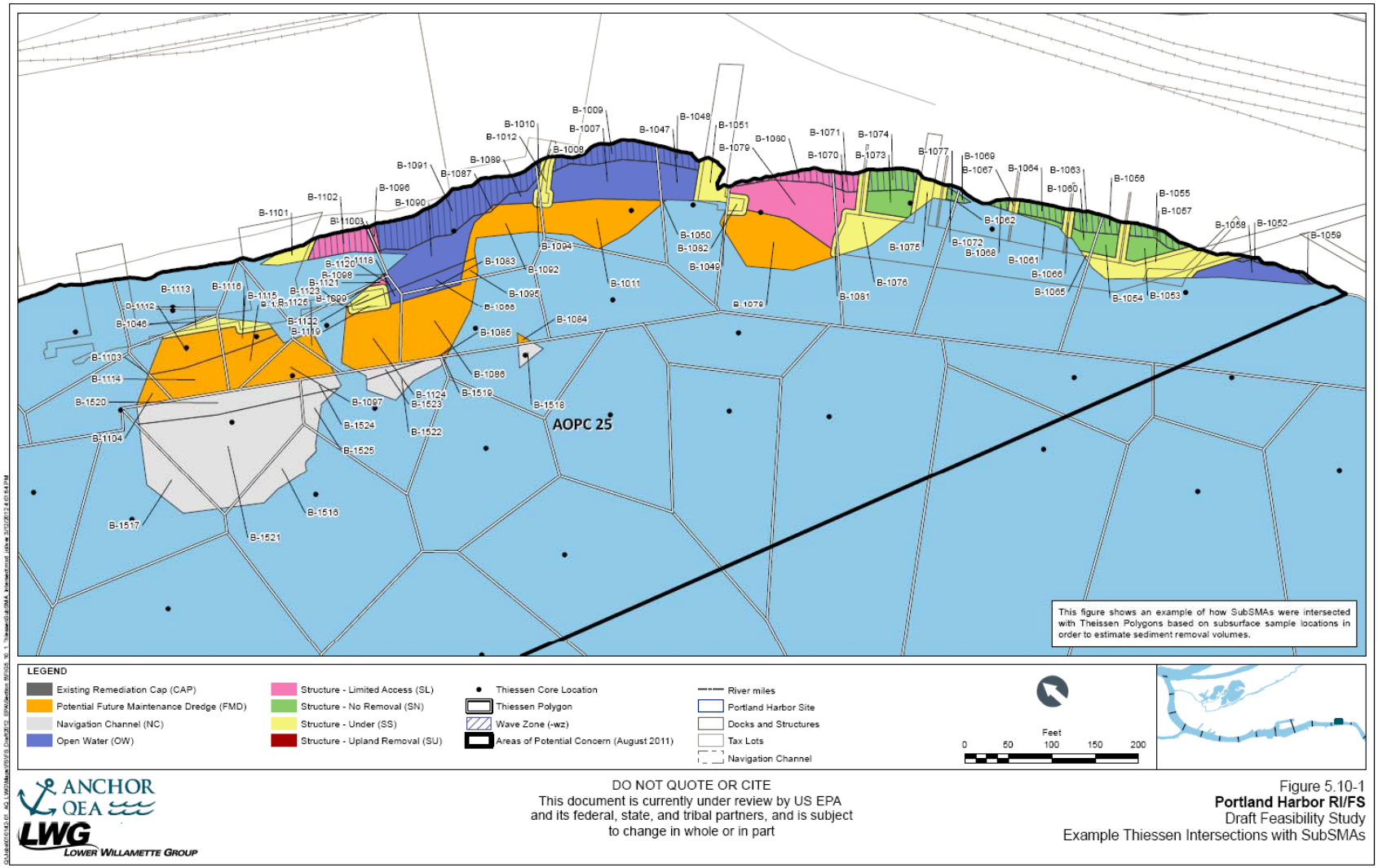


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Figure 5.10-1
Portland Harbor RI/FS
Draft Feasibility Study
Example Thiessen Intersections with SubSMAs

Draft FS Alternatives

Alternative	Total Dredge Volume Removed (Cubic Yards)	Dredge Areas (Acres)	In-situ Treatment Areas (Acres)	Engineered Cap Area (Acres)	Enhanced Monitored Natural Recovery	Years to Construct	Estimated Net Present Value Cost ($Millions)	
							*Low	*High
B-i	198,000 to 293,000	23	19	7	75	2	$169	$250
B-r	541,000 to 783,000	42	0	13	41	6	$228	$330
C-i	314,000 to 459,000	34	29	13	40	3	$231	$345
C-r	777,000 to 1,127,000	63	0	10	73	7	$304	$449
D-i	387,000 to 565,000	43	34	15	37	3	$266	$398
D-r	914,000 to 1,321,000	78	0	13	68	8	$351	$520
E-i	936,000 to 1,362,000	91	58	25	15	7	$463	$709
E-r	1,775,000 to 2,596,000	145	0	21	15	12	$568	$884
F-i	2,129,000 to 3,151,000	176	117	49	3	15	$878	$1,389
F-r	4,196,000 to 6,182,000	304	0	38	3	28	$1,077	$1,762

*The cost of the entire duration of the project in today's dollars.